ABSTRACT OF THE DISCLOSURE

A two layer system can transform an arbitrary specified light field at an input plane to a desired light field at an output plane. The light field includes both intensity and phase. Such a system can be cascaded for higher level functionality. There are two computations involved. The first computes a sensitivity matrix symbolically. The elements of the matrix hold the variation in each element at the output plane with variation in each element of both phase screens. An element of this matrix is provided for reference. The second algorithm iteratively updates the phase screen values to bring the output field to that desired. On each iteration, the algorithm performs a forward computation from input to output. The phase values are updated using the sensitivity matrix and the error at the output relative to that desired.